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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,846	11/20/2001	Guangji Dong	295 P002	6407

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EXAMINER
CHANG, YEAN HSI

ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/996,846	DONG, GUANGJI	
	Examiner	Art Unit	
	Yean-Hsi Chang	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-14,17-27 and 30-33* is/are rejected.

7)☒ Claim(s) *3, 15,16,28 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 April 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4, 6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheon (US 5,731,954).

Cheon teaches a microcomputer heat dissipation system comprising:

- Heat absorbing units (12 and 30, fig. 1) (claim 1)
- Heat-generating electrical components (8 and 28, fig. 1) (claim 1)
- A fluid circulating unit (P, fig. 2) including a pump (P, fig. 2) (claims 1 and 2)
- A heat-radiating pipe (66, fig. 2) (claim 1)
- A heat-radiating plate (42, fig. 1) disposed on the outer surface of a side wall of the chassis (see fig. 1), including a heat-dissipating structure (44, fig. 1) (claims 1, 8 and 10)
- A chassis (7, fig. 1) (claim 1)
- Wherein the heat-absorbing units are constructed as a sealed hollow cavity (22, fig. 2) provided with an inlet (18, fig. 2) and an outlet (20, fig. 2) for the

fluid and with one heat-absorbing face (14, fig. 1) being bonded to the heat-generating element (claim 4)

- Wherein the heat-absorbing units are disposed in communication with the fluid circulating unit via series connection (see fig. 2) (claim 6)
- Wherein the heat-radiating plate can be attached to the chassis through a mounting support (50, fig. 1), with the heat-circulating pipe passing through the wall of the chassis (see fig. 1) (claim 9)

3. Claims 11-14, 17-20, 22, 24-27 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheon.

Cheon teaches a microcomputer heat dissipation system comprising:

- A power supply heat dissipation system (left on 6, fig. 2) in a chassis (7, fig. 1), comprising:
  - High power transistors (28, fig. 1) soldered to a circuit board of a power supply unit (6, fig. 1) (Claims 11 and 13-14)
  - A heat-absorbing unit (30, fig. 1) (claim 11)
  - A heat-conducting device (29, fig. 1) to which the high power transistor is bonded, being connected to a heat-radiating plate (26, fig. 1) (claims 11-12 and 17-18)
- A circulation-based heat dissipation system (see fig. 1) in the chassis, comprising:
  - A heat-absorbing unit (12, fig. 1) (claim 11)

- Heat-generating electrical elements (8, fig. 1) (claim 11)
- A fluid circulating unit (P, fig. 2) including a feed pump (P, fig. 2) which could be enclosed in a shock-absorbing casing having two layers (claims 11 and 19)
- A heat-radiating pipe (66, fig. 2) being of metal (see col. 5, lines 8-11; 64 is part of 66) (claims 1 and 24)
- A heat-radiating plate (42, fig. 1) being attached to the outer surface of a side wall of the chassis (see fig. 1), including a heat-dissipating structure (44, fig. 1) (claims 11 and 25)

➢ Wherein the heat-absorbing units are constructed as a sealed hollow cavity (22, fig. 2) provided with an inlet (18, fig. 2) and an outlet (20, fig. 2) for the fluid and with one heat-absorbing face (14, fig. 1) being bonded to the heat-generating component (claims 20 and 27)

➢ Wherein the heat-absorbing units are disposed in communication with the fluid circulating unit via series connection (see fig. 2) (claim 22)

➢ Wherein the heat-radiating pipe is bonded to the heat-radiating plate (see fig. 1) (claim 26)

➢ Wherein the heat-radiating plate is mounted on a mounting support (50, fig. 2) mounted on the outer wall surface (see fig. 1) (claim 30)

➢ Wherein the mounting support has a recess (not numbered, fig. 2) with the heat-radiating pipe mounted in the recess (claims 31 and 32)

- Wherein the heat-radiating plate has metal heat-radiating ribs (44, fig. 2) on the outside surface (claim 33)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 5, 7, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheon in view of Donahoe et al. (US 6,333,849 B1).

Cheon discloses the claimed invention except the heat-absorbing units being disposed in communication with the fluid circulating unit via series and parallel connection.

Donahoe teaches heat-absorbing units (34, fig. 1; 81, fig. 7) being disposed in communication with the fluid circulating unit (30, fig. 1) via series and parallel connection for minimizing the cooling influence between heat-generating components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Cheon with the heat-absorbing units taught by Donahoe such that the cooling influence between heat-generating components would be minimized.

Allowable Subject Matter

6. Claims 3, 15-16 and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record, Cheon (US 5,731,954) and Donahoe et al. (US 6,333,849 B1), taken alone or in combination fails to teach or reasonably suggest a microcomputer heat dissipation system comprising: a pump of a fluid circulating unit is securely attached inside the chassis by a shock absorbing device as set forth in claims 3 and 28; a power supply circuit board being connected, via a circuit, to a connector socket, and a plug end being connected by a wire belt to the location where high power transistors are soldered to the power supply circuit board as set forth in claims 15 and 16; and a fluid feed pump being enclosed in a shock-absorbing casing having at least two layers with shock-absorbing structure provided in between, and in a bottom portion of the casing, shock-absorbing supports being provided and attached to a bottom of the chassis as set froth in claim 29.

Response to Arguments

8. Applicant's arguments filed 14 April 2003 have been fully considered but they are not persuasive.

Applicant argues, first that "Cheon'954 passage 66 is not a heat-radiating pipe." According to Merriam Webster Collegiate Dictionary, a pipe is defined as a cylindrical passage. Passage 66 is partly cylindrical in shape (see fig. 1) and is used for the coolant to give up heat; therefore, passage 66 may be called a heat-radiating pipe.

Secondly, applicant argues that "Cheon'954 does not disclose a heat-radiating pipe bondable to a heat-radiating plate." Figure 2 of Cheon shows that radiating pipe 66 is bondable to a heat-radiating plate 42.

Thirdly, applicant argues that "Cheon'954 does not disclose a heat-radiating plate disposed on an outer wall of the chassis." Wall 7 of Cheon'954 is considered as an outer wall of the chassis.

Fourthly, applicant argues that "Cheon'954 does not dispose a mounting support having a recess." Fig. 1 of Cheon'954 shows that the heat-radiating plate 42 can be attached to the chassis through the medium of a mounting support (such as 50 in fig. 1) with the heat-radiating pipe passing through the wall.

The rest of the arguments are moot since the related claims have been objected to as stated in paragraph 6 hereinabove.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yean-Hsi Chang whose telephone number is (703) 306-5798. The examiner can normally be reached on 07:30-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (703) 308-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431 for regular communications and for After Final communications. There are RightFAX numbers and provide the fax sender with an auto-reply fax verifying receipt by the USPTO: Before-Final (703-872-9318) and After-Final (703-872-9319).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-8558.

Yean-Hsi Chang
Patent Examiner
Art Unit: 2835
June 15, 2003

DARREN SCHUBERG
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